NOTE XVI.

ON TAENIODERA QUADRILINEATA AND SOME ALLIED SPECIES

BY

OLIVER E. JANSON.

It has been long evident to me, that several distinct species have been confused under the name of *Macronota* or *Taeniodera quadrilineata*, but owing to the want of sufficient material, I have hitherto been unable to arrive at any satisfactory conclusion regarding them. Recently however, by the acquisition of Mr. F. Moore's collection of Cetoniidae, I have secured a good series of specimens from India, and by the courtesy of Mr. Ritsema I have obtained the loan of the various Javanese and Sumatran examples of this group contained in the collection of the Leyden Museum. These, together with other specimens to which I have had access, have enabled me to recognize both sexes of no less than four species, all of which closely resemble one another in general form and coloration, but present structural and other characters by which they may be readily separated.

The first of these species, *quadrilineata* Hope, was very briefly described in 1831 by that author in his Synopsis of Nepaul Insects [Gray's Zool. Misc. p. 24 [1])] under

1) Schaum maintains (Ann. Soc. Ent. France, 1844, p. 367; 1849, p. 294) that these brief and useless descriptions of Hope's should be entirely ignored, but I consider where the types are accessible and their identity can be clearly established, the law of priority should be adhered to. The authors of the Munich Catalogue have adopted this course.

the name of »*Trichius*" *quadrilineatus*. The original specimens from Major Hardwicke's collection are in the British Museum, and one of them, bearing Hope's label and evidently the specimen which served as his type, is an example of a common Indian species, in which the usual red ground color of the elytra is entirely replaced by black; this has enabled me to determine without doubt as to which species the name of *quadrilineata* should be applied.

The second species is the *quadrilineata* G. & P. (Mon. Cét. p. 321, t. 63, f. 5). Dr. Schaum appears to have first committed the error of regarding this species as identical with *quadrilineata* Hope, with which it has ever since been associated. It is evidently only by accident that Gory adopted the same name (which he ascribes to Drapiez) for his Javan species as had been used two years prior by Hope for the allied Indian species. As it is therefore necessary to rename Gory's species, I have followed the usual practice in such cases in proposing the name of *Goryi* for it.

The third species, *scenica* G. & P., was considered by Burmeister to be the male of *quadrilineata* G. & P., the similar habitat, resemblance in color and the fact that Gory's types of the two species chanced to be of opposite sexes, are no doubt the reasons that he was led into this error. I had long suspected that the dissimilarity in the clypeus was not merely a sexual character, but we are indebted to Mr. Ritsema for the first discovery and correction of this error (Notes Leyd. Mus. XII, p. 11).

The fourth species is apparently undescribed. I have therefore proposed a name and indicated wherein it differs from *quadrilineata*. I have possessed specimens for some years and have observed it in other collections under that name.

The following are the principal characters by which the four species may be distinguished, after which I have given further details of the points in which they differ, with particulars of their localities as far as they are known to

me. I may mention that besides the secondary sexual characters in the antennae, etc., the males of all the four species have the abdomen furrowed beneath.

1. Clypeus emarginate at the apex.
   A. Antennae in the male very large, the club nearly as long as the head.
      a. Base of thorax moderately lobed, scutellum with an impressed yellow median line . . . . . *quadrilineata* Hope.
      b. Base of thorax strongly lobed, scutellum with yellow marginal line. . . . . *scenica* G. & P.
   B. Antennae in the male with the club much shorter than the head . *virgata* Jans.
2. Clypeus broad and entire at the apex . . . . . *Goryi* Jans.

1. *T. quadrilineata* Hope.

This species has the clypeus emarginate at the apex, the club of the antennae very large in the male, the thorax is slightly narrowed at the base and but moderately lobed behind, the scutellum is slightly sulcate with an impressed and punctured yellow median line, the elytra have a strong longitudinal discal carina, the pygidium has only one central linear yellow spot, and the legs are always entirely black.

I have a specimen agreeing with Hope's type in having the ground color of the elytra entirely black, and have seen specimens intermediate between it and the ordinary form. I also have examples in which there are scarcely any indications of the usual black markings. It is represented in most collections and appears to be moderately common in the Himalayan region of India. I have specimens from Nepaul, Darjeeling and Assam. Mr. Doherty has recently taken it in some quantity in N. Manipur.

2. *T. Goryi* Jans.

(4-*lineata* G. & P., nec Hope).

This species may be at once distinguished from the other three by its broad, non-emarginate clypeus, the margins are also more reflexed and the punctuation is closer; both the head and thorax are usually red or piceous, and the latter has a distinct elevated median line; the scutellum is sparsely punctured and has no median line; the elytra are more coarsely punctured and have a more strongly raised discal carina than in *quadrilineata*; there is a large round central spot on the pygidium, and in the single male example I have seen, there is an additional small spot on each side as in *scenica*; the tibiae are red or piceous and in some specimens the legs are entirely red; the anterior tibia of the male has no indication of lateral teeth.

Appears to be rare in collections. I possess only two females from Java, the only male I have seen comes from the same Island, and has been kindly communicated to me by Mr. Ritsema, together with two examples of the other sex, one of them taken by Dr. B. Hagen at Tandjong Morawa, East Sumatra.

3. *T. scenica* G. & P.

This species differs from *quadrilineata* Hope in having a stronger longitudinal carina on the head, the thorax is more strongly lobed at the base, has a feeble but distinct longitudinal elevation in the centre, and in the male it is evidently broader at the base; the scutellum is flat, without a median line and is margined at the sides with yellow; the elytra are less sulcate at the suture and have a narrower discal carina; the pygidium is usually marked with three yellow spots and is often red at the apex; the underside is often red or yellow in the centre, and the legs almost invariably have the tibiae and tarsi red or piceous or are entirely red or yellow; the mesosternal process

is more compressed and forms an acute carina in front.

I possess both sexes from Batavia, and have examples before me, belonging to the Leyden Museum, likewise from West Java, and collected by Messrs. Blume, Muller, Piepers and Sijthoff. A very pretty pale variety with yellow legs has been sent by Mr. Doherty from Perak.

The black markings on the elytra are very variable in this as well as in the allied species, and are sometimes quite absent; it is this variety that has been described recently by Dr. Kraatz under the name of *rufipennis*, as has been already indicated by Mr. Ritsema. In the female of this species the yellow lines on the thorax are much broader than in the male.

4. *T. virgata*, n. sp.

Very similar to *quadrilineata* Hope but larger, head more coarsely and closely punctured, the median carina rather stronger, clypeus deeply emarginate, club of the antennae in the male about half the length of the head, much shorter in both sexes than in *quadrilineata*. Thorax regularly rounded at the sides and distinctly narrowed behind, the basal lobe short and broad, more closely punctured than in *quadrilineata*, the four longitudinal bands broader and more regular. Scutellum black, with a few coarse punctures and an impressed yellow median line. Elytra red with elongate black markings and small yellow spots, more produced and rounded at the apex than in *quadrilineata*, the black portion broader with the yellow spot linear, oblique and further from the apex than in that species. Pygidium coarsely rugulose, black with a narrow yellow central line. Underside and legs black or piceous with broad yellow markings, mesosternal process broader and more obtuse than in *quadrilineata*. — Length 18—19 mm.

India; Mungphu and Darjeeling. In my collection and the Indian Museum.

T. (*Euselates*) *magna* Thoms., from Cochin China, is only known to me by the very imperfect description; it would appear to be allied to *virgata* but to differ in the markings of the elytra and in having four spots on the pygidium; the form of the clypeus is not mentioned.

T. quadrivittata Schaum, from Ceylon, belongs to the same group as *quadrilineata*, but is very distinct and is too well-known to need description here.

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